U.S. Food Aid and Sustainable Development: Forty Years of Experience



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Summary

Inder Public Law 480 the United States has contributed substantial food aid to developing countries for more than 40 years. This food aid has two primary objectives: to alleviate hunger (in the short term) and to promote sustainable development (in the long term).

During 1996 and 1997, USAID's Center for Development Information and Evaluation examined the role of U.S. food aid in contributing to sustainable development. CDIE conducted fieldwork in five countries proper and a desk study of the nine countries in the Sahel region of Africa.

The case studies show that in addition to improving a country's balance-of-payments situation, program food aid can leverage or support a sound economic policy environment and thus promote sustainable development. However, food aid can also be a crutch that lets a country put off making important decisions on food policy.

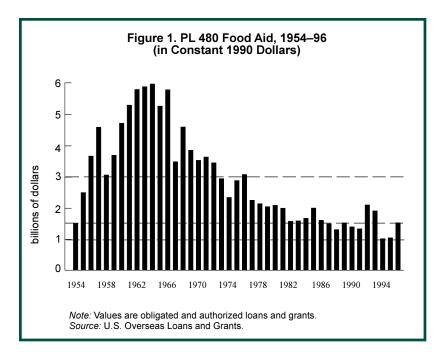
The study also finds that food aid has had beneficial social effects. Food-for-work programs, for example, automatically target the poor, since the better-off spurn working for rations. At the same time, no welfare stigma attaches to participants in food for work. As for maternal and child health programs, the evaluation found that participating mothers learned better health and feeding practices.

The study acknowledges that it is more efficient to transfer resources as financial aid rather than as food aid—that is, to write a check rather than ship grain. As a practical matter, though, financial aid is not fungible with food aid. Therefore, the choice is not between food aid and financial aid, but rather between food aid and no aid.

Statistical Overview

The United States supplied more than \$52 billion of food aid worldwide over the 43-year period 1954 (when PL 480 was enacted) through 1996. The annual commitment averaged \$1.2 billion a year in current dollars. Measured in *constant* dollars, however, food aid levels since the mid-1960s have decreased substantially (see figure 1). From their peak in the mid-1960s, they had declined by half by the mid-1970s; they had declined by half again by the mid-1980s; and by the mid-1990s, they had declined by another third.

Fifty-nine percent of the food was provided under Titles I and III of PL 480, mainly to governments. This "program" food aid was generally sold on the open market to anyone with money. The other 41 percent was provided under Title II, mainly to private voluntary organizations (PVOs). Most of this "project" food aid was given, in kind, directly to the poor through regular foodfor-work, maternal and child health, and school feeding programs. In recent years an increasing proportion of Title II food aid has been monetized, rather than provided in kind. In addition, an increasing proportion has been required for emergency relief.



The United States has been the world's major supplier of food aid—providing on average 54 percent of the total from 1970 through 1995. In more recent years (1994–96), though, U.S. food aid levels have decreased to 43 percent of world food aid. Food aid has also been an important, though declining, component of total U.S. economic assistance, averaging 30 to 40 percent during the 1950s and 1960s. Since the mid-1970s it has averaged only 20 to 30 percent.

The regional allocation of U.S. food aid has varied over time. Food aid was initially provided to war-torn Europe after World War II. Then, in the mid-1960s, massive shipments were made to Asia, particularly the Indian subcontinent. In the mid-1970s, Africa began to absorb an increasing share of U.S. food aid, and after the 1978 Camp David peace accords, food aid levels to the Near East increased; at the same time, food aid levels to Asia began a steady decline. In the early 1980s, shipments to Latin America and the Caribbean began to increase, and since the early 1990s, Eastern Europe and the new independent states have become important food aid recipients.

U.S. food aid, like all U.S. bilateral assistance, is not allocated equally among countries. During 1973–92, for example, almost half of all U.S. food aid was sent to only six countries: Egypt, Bangladesh, India, Pakistan, Indonesia, and Sudan. Most of the rest went to 44 other countries.

The aggregate level of food aid provided to a given country is only one measure of its relative importance.

Another is the proportion of total grain consumption supplied by food aid. Using this measure, food aid was relatively unimportant in the six largest food aid recipients. It accounted for less than 2 percent of total grain consumption, on average, during 1973–92. By contrast, food aid from all sources accounted for 16 to 34 percent of total grain consumption, on average, in six relatively small countries: Jamaica, Mauritania, Mozambique, Somalia, Yemen, and Bolivia.

Some countries tend to remain on the food aid rolls for extended periods of time. For example, Egypt, India, Bangladesh, Pakistan, Sri Lanka, and Morocco were among the 10 largest food aid recipients during two decades, 1973–82 as well as 1983–92. By contrast, Korea, Indonesia, Portugal, and Israel were

among the 10 largest food aid recipients during the first decade but not during the second. Similarly, Sudan, Peru, Jamaica, and El Salvador were among the 10 largest food aid recipients in the latter decade but not the former.

Six Case Studies

CDIE carried out fieldwork in five countries: Bangladesh, Ethiopia, Ghana, Honduras, and Indonesia. A desk study for the Sahel region was treated as a sixth "country" case study, even though the region actually includes nine countries (Burkina Faso, Cape Verde, Chad, the Gambia, Guinea–Bissau, Mali, Mauritania, Niger, and Senegal).

Of these, the two largest recipients of U.S. food aid have been Bangladesh (\$2.4 billion) and Indonesia (\$1.8 billion). Food aid has been *the* major component of U.S. bilateral economic assistance to two countries (Ethiopia and Bangladesh), equaling 64 and 59 percent, respectively. In two other case study countries (Ghana and Indonesia), it represented 47 percent, almost half of U.S. economic assistance. The United States has shipped 35 different commodities as food aid to this group of six. The predominant commodity was wheat, except in Indonesia, where it was rice. The United States continues to provide food aid to all countries except Indonesia and two Sahelian states, Niger and Senegal.

Figure 2 shows the amount of food aid distributed to the six "country" case studies over time in 1990 constant dollars. Collectively, the six case studies re-

ceived 12 percent of all U.S. PL 480 food aid during 1954–94—but not necessarily each year. Before 1969 the group of six received less than 2 percent of U.S. food aid in most years; since then, they have received 19 percent, on average.

From 1971 through 1994, food aid's contribution to the cereal supply in five of the case studies was significant, 6 to 10 percent (see table 1). In Indonesia, though, it averaged only 1 percent of the cereal supply during this period. Food aid provided substantial balance-of-payments support to two countries (Bangladesh and Ethiopia), equaling 9 to 10 percent of the value of export earnings, on average, over the entire period (see table 1). It was much less significant for Ghana, Honduras, Indonesia, and the Sahel region, equaling only 1 to 2 percent of export earnings.

How well have these countries performed? To what extent have key quality-of-life indicators improved over time? *Life expectancy* has increased and *child mortality* has decreased for all six case studies over the 35-year period 1960–94 (see table 2). In Ethiopia and the Sahel, though, life expectancy was still only 47 and 48 years, respectively, in 1994, and child mortality remained high. *Per capita calorie availability* in 1962 was lowest in Ethiopia and Indonesia (1,816 and 1,842 calories per day, respectively). Thirty years later it was even lower in Ethiopia (1,621 calories); but in Indonesia it was much higher (2,718 calories), higher than in any of the other cases.

Finally, per capita incomes were lowest in Ethiopia and Bangladesh in 1994 (\$100 and \$220, respectively), and malnutrition rates among children under 5 were highest in these two countries (48 and 67 percent, respectively—see table 3). This reflects the tendency for income levels and malnutrition rates to vary inversely. The relationship generally held across all cases. An exception was Indonesia, where malnutrition (40 percent) was much higher than one would expect given the country's relatively high per capita income (\$880). That anomaly confounds the experts.

Given this backdrop, what effect has the American food aid program had on economic, social, and political development in the countries represented by the six case studies?

Testing the Merits of Food Aid: Eight Propositions

CDIE examined a set of fundamental propositions concerning the role of food aid in sustainable development, some making the case for food aid and some, against. The case *for* food aid rests on five propositions:

- Food aid provides real resources necessary to expand investment or dampen inflation.
- Selling food aid generates counterpart funds by transferring domestic resources from the private sector to the public (or PVO) sector. This local currency can alleviate budgetary constraints or fund development activities.
- Food aid can help disadvantaged groups by supporting nutrition, food for work, or other direct-distribution projects.
- When provided by a reliable source, food aid contributes to political stability, satisfying a basic precondition for sustainable development.
- Food aid is at least partly additional, because it is aid that would not otherwise be forthcoming as cash, and it is food that would not otherwise be purchased.

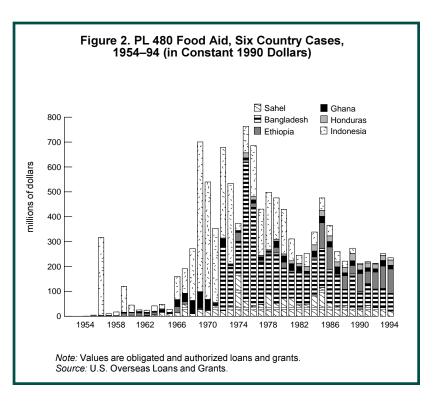


Table 1. Relative Importance of U.S. Food Aid Programs, Six Case Studies, 1971–94

Case Study	Food Aid as a Percent of Cereal Supply (1971–94)	as a	od Aid Percent ort Earnings Maximum
Bangladesh Ethiopia Ghana Honduras Indonesia Sahel region	6 8 7 10 1	9.9 8.9 1.5 1.9 0.4 2.5	78.8 (1975) 49.7 (1993) 5.5 (1969) 3.3 (1989) 22.2 (1969) 8.4 (1974)

Note: Food aid as a percent of export earnings refers to the following years: Bangladesh (1972–94); Ethiopia, Ghana, Honduras, and Indonesia (1960–94); Sahel region (1968–94).

Sources: OECD, Public DAC Database, 1996; FAO, FAOSTAT Database, 1996; USAID, U.S. Overseas Loans and Grants, 1996.

The case *against* food aid rests on three propositions:

- Food aid discourages local agricultural production, either by depressing domestic prices or by enabling recipient governments to postpone needed policy reform.
- Food aid leads not to greater food self-reliance but to greater dependence.
- Compared with cash, food aid is second best. It is expensive, dependent on surpluses in donor countries, and sometimes inappropriate.

be used for development (or, when used in kind to support food-for-work projects, it can augment employment and support infrastructure development). Food aid can also have a negative economic impact: it can discourage domestic food production and marketing.

Resource transfer. Food aid helps governments save foreign exchange they otherwise would have used to import food commercially. The saved foreign exchange may then be used to import alternative goods, for either investment or consumption purposes. In this sense, food aid, like other types of foreign economic assistance, represents a pure gain to the national economy equal to the amount of foreign exchange saved.

Not all food aid falls into this category. Food aid that is given to people with no purchasing power (in famine situations, for ex-

ample) normally does not represent food that would have been imported commercially. Therefore, it should not be considered in terms of saved foreign exchange. The same is true for most food aid given away to mothers at maternal and child health centers or to children at schools.

Although food aid generally does not substitute for all commercial imports, it almost certainly substitutes for a portion. This is important, because if food aid were *additional* to food that otherwise would be imported commercially, it would increase overall supply, thereby depressing producer prices and possibly creating a disincentive to domestic food production.

Program Impact

Has U.S. food aid benefited the poor and promoted sustainable development? The following sections discuss the economic, social, and political effects of the food aid program as well as equity and efficiency considerations.

Economic Effects

Food aid can have a positive economic effect in three main ways: 1) it always provides additional resources (food) to the recipient country, 2) it may encourage adoption of needed food policy reforms, and 3) when sold, it provides additional money (local currency) that can

Table 2. Demographic and Health Indicators, Six Case Studies, Various Years

Case Study	at E	pectancy Birth ears) 1994	(per	Mortality 1,000 rths) 1994	C Ava	Per Capita alorie iilability 1991–92
Bangladesh	40	55	247	117	2,093	1,995
Ethiopia	37	47	294	200	1,816	1,621
Ghana	46	56	213	131	2,078	2,161
Honduras	48	67	203	54	1,942	2,311
Indonesia	42	62	216	111	1,842	2,718
Sahel region	36	48	318	193	2,031	2,348

Sources: UNICEF, State of the World's Children, 1996; UNICEF, The Progress of Nations, 1996; FAO, FAOSTAT Online Database, 1996.

Food policy reform. It is difficult to demonstrate a direct, causal linkage between food aid and food policy reform—and subsequent economic growth. U.S. food aid has typically been part of a larger U.S. economic assistance package, which in turn has been part of a much larger multidonor effort. As a result, it is difficult to disentangle the role of the food aid from the overall package.

The Bangladesh experience suggests food aid can leverage policy reform. For 15 years after independence, U.S. food aid equaled more than 10 percent of the country's export earnings. (In 1975 it equaled fully 78 percent!) Much of this food aid was supplied explicitly in exchange for policy reform. The government agreed to phase out economic policies that were impairing the food sector and to introduce new policies designed to enhance food security. These policy reforms boosted Bangladesh's economic growth. Policy conditionality was also used successfully in some Sahelian states, such as Mali.

Food aid can also support an *existing* macroeconomic policy environment. This occurred in Indonesia in the late 1960s and early 1970s when the new Soeharto government began implementing policies designed to restore economic order, initiate income growth, promote agriculture, support rural infrastructure, and maintain price stability for rice. During six critical years, U.S. food aid equaled more than 5 percent of the country's export earnings (and in 1969 it equaled 22 percent). Many factors, including the availability of food aid at the right time, have contributed to Indonesia's remarkable economic performance.

Conversely, food aid can hamper sustainable development when it permits governments to postpone needed economic policy adjustments. This occurred in Honduras during much of the 1980s. U.S. food aid (and other bilateral assistance) supported U.S. *political* objectives in Central America but did not promote economic growth. Instead, the assistance enabled the Honduran government to postpone (but not avoid) the debt crisis experienced by most other countries in the wake of the oil price shocks of the 1970s. Food aid had a similar effect in some Sahelian states, because it enabled governments to finance statist policies, support overvalued currencies, and postpone change.

Finally, food aid may have no discernable effect one way or the other on a country's economic policy environment. This was the case in Ghana before the mid-1980s; some Sahelian states; and until recently, Ethiopia. These (and other) African countries were

Table 3. GNP Per Capita and Child Malnutrition, Six Case Studies, Various Years

Case Study	GNP Per Capita (1994 Dollars)	Malnutrition of Children Under 5 (%)
Bangladesh	220	67
Ethiopia	100	48
Ghana	410	27
Honduras	600	21
Indonesia	880	40
Sahel region	393	30

Source: Demographic and Health Surveys conducted 1990–95; "malnutrition" is defined as weight-for-age of more than two standard deviations below the median.

plagued with political instability over much of the period. As a result, food aid was provided to governments that were not in power long enough to implement the economic policies needed for sustainable development. Or it went to governments that were not committed to reform in the first place.

Local currency. Counterpart funds (local currency generated from the sale of program food aid) augments government revenues. The United States generally has tried to influence how this money is spent. Sometimes the money has been used as budget support to fund activities the government planned to fund anyway. In other cases, it has been used for activities that would not have been funded in the absence of the food aid. In still other cases, USAID and the recipient government have disagreed about how the local currency should be allocated, and this has caused heated debate since local currency generated under most PL 480 programs is owned by the host country, not the United States. (A clear exception is monetized Title II programs, which provide cash to PVOs to fund development activities.) Partly for this reason, the United States has not evaluated the effect of local currencyfunded activities in most countries.

In principle, local currency contributes to sustainable development when the resources are used to support a sound, development-oriented budget or when qualified nongovernmental organizations (or government agencies) use the resources to fund high-priority development activities. This often means investments in agriculture and rural infrastructure, because in most low-income

countries agricultural development is fundamental to achieving long-term economic growth.

Using local currency to support the government's budget was done in Indonesia and to some extent in Bangladesh and in some Sahelian states. The money can also be used to help fund discrete projects (as distinct from sectors of the government's budget), as occurred to some extent in all six case studies. However, since money is fungible, it is difficult to be sure the activities would not have been funded even without food aid.

Disincentive effect. Providing large quantities of food aid for sale on the open market at the wrong time can cause a disincentive to domestic food production. This occurs through two main mechanisms. First, it enables governments to delay implementing policies

needed to encourage farmers to increase production. This occurred in varying degrees in Ghana, Honduras, and the Sahel. Second, unless it substitutes for commercial imports, program food aid depresses domestic prices, reducing farmers' incentive to produce grain. This probably occurred at certain times in Bangladesh and Honduras.

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By contrast, targeting food aid to those who lack purchasing power and are unable to buy food increases food consumption and incomes without adversely affecting domestic food production. Virtually all Title II programs in all six case studies were well targeted, and any disincentive effect was obviated.

Social Effects

Nonemergency food aid has had its greatest social effects through three programs: 1) food for work, 2) maternal and child health, and 3) school feeding. These programs involve direct distribution of food by PVOs or the World Food Program to the intended beneficiaries or the sale of food (monetization) to raise cash for development. They have been excellent vehicles for differentially benefiting low-income groups.

Food for work. Food-for-work projects have been popular for several reasons. They do not have the same welfare stigma associated with food handouts. They are effective at targeting the poor, since only the unemployed or destitute are willing to work for food rations

valued at less than the market wage rate. They also often target entire poor *regions*, as was done in Bangladesh, Honduras, and Indonesia. Finally, public works created through food for work, such as roads and irrigation canals, can enhance long-term development.

For all six case studies, food for work succeeded in reaching poor areas and targeting poor people. But the public works created were often of poor quality, and administrative problems abounded. This is partly because many food-for-work projects were initiated as emergency programs and emphasized short-term relief rather than long-term development.

Maternal and child health. Maternal and child health (MCH) programs have sought to 1) improve the health and *nutritional status* of poor mothers and their babies, 2) improve the *nutritional knowledge and practices* of

poor mothers, and 3) generate supplemental food or income through gardening or small enterprises. The programs generally consist of monthly meetings of participants selected from poor villages during which MCH staff weigh the mothers' babies to monitor nutritional progress in relation to standardized weight-forage charts. The staff in-

struct the gathered mothers about various health or nutritional themes, such as how to treat diarrhea. In some cases, the mothers are encouraged to participate in a garden or a small cooperative enterprise. And each mother is given a food ration such as soy-fortified cornmeal to take home for supplemental feeding of the child.

It is difficult to demonstrate unambiguously the effect of food aid on the nutritional status of children under 5. Earlier studies support this conclusion as well. By the late 1980s it was clear that MCH programs relying solely on food supplementation (without nutrition education and health services) had no discernable effect on nutritional status. (Because these older programs have not been an effective tool for combating child malnutrition, USAID no longer supports them.) In addition, since the children's ration provided by the food supplement was often relatively small or was shared among family members, the likelihood of seeing a *measurable* improvement in children's growth was reduced.

Even when the food was provided together with health interventions (clean water, immunizations, sanitation), the evaluations reviewed for this assessment could rarely disentangle the effect of the food aid program from the effects of these and other factors such as reduced poverty and increased incomes. Methodological problems of this nature arose in all five case studies where food aid programs had a nutrition objective: Ethiopia, Ghana, Honduras, Indonesia, and the Sahel (Burkina Faso, the Gambia, Mauritania, and Senegal).

Other studies, however, have found some evidence that MCH feeding programs can contribute to improved health and nutritional status of vulnerable populations when combined with complementary inputs. In addition, MCH programs can improve mothers' knowledge about health and feeding practices. This was the case in Ethiopia, Indonesia, and some Sahelian states. Thus, the *education* objective of MCH programs (if not the objective to improve nutritional status) is being achieved.

School feeding. School feeding programs generally provide a prepared lunch served at school, free, to primary school students. The objectives of most programs are to 1) increase school enrollment and attendance, 2) improve nutritional status, and 3) improve the cognitive or academic performance of the children. Over time, the emphasis has shifted from the nutritional objective to the educational objectives.

USAID has used food aid to support school feeding programs in two Sahelian countries (Burkina Faso and the Gambia), Bangladesh, Ghana, and Honduras, but not in Ethiopia or Indonesia. Like MCH programs, these programs have achieved important educational objectives (including increased school enrollment and improved attendance)—at least in Bangladesh, Honduras, and some Sahelian states. In Ghana, though, there is no evidence that any of the program's objectives have been achieved. Like MCH programs, school feeding programs seemed to have no measurable effect on children's nutrition. This may reflect the difficulty of measuring nutritional change among older children (those of primary school age).

Political Stability

Food aid can help to ensure food availability at acceptable prices. Many believe this, in turn, helps to avoid bread riots or other forms of political instability that could lead to a coup d'etat. This is important, because political stability is a precondition for sustainable development. But food aid that enhances politi-

cal stability may not always be conducive to sustainable development. This is the case if aid enables the regime in power to perpetuate inappropriate food policies that hamper economic and social development.

The case studies showed no clear or consistent relationship between food aid and political stability. In low-income countries such as Bangladesh, political stability is clearly at risk when food prices are high and fluctuate widely. In this case, food aid helped stabilize food prices. This also seemed to be the case in Indonesia in the late 1960s and early 1970s and in Honduras in the mid-1980s. However, food aid cannot ensure political stability; this seemed clear in the Sahel, Ghana, and Ethiopia.

Equity

Food aid has been a successful vehicle for benefiting the poor *directly*, primarily through feeding programs targeted at poor people and poor regions. Foodfor-work projects, in particular, have benefited the poor directly, as have food aid programs that supplied a self-targeting commodity that the poor, rather than the rich, tend to buy (such as wheat in rural areas of Bangladesh).

Food aid can also benefit the poor *indirectly* if it supports an economic policy environment that encourages equity-oriented growth. Such a growth strategy generally requires investments in rural areas where the poor earn their livelihood, usually in agriculture, as occurred in Indonesia. Food aid can also be conditioned on policy reforms designed to encourage equity-oriented growth, as occurred in Bangladesh. Or it can be suspended in the absence of such reforms, as in Ghana. Regardless of the policy regime, local currency generated from the sale of food aid can be invested to benefit the poor. In Indonesia and Bangladesh, for example, it was used to build rural infrastructure (including roads and irrigation canals) and to fund agricultural research (resulting in high-yielding crop varieties that boosted output).

Efficiency

It is normally more efficient to transfer resources as financial aid rather than as food aid. The recipient government can then use the financial aid to purchase food from neighboring countries and reduce transportation costs. When the recipient is a PVO that intends to use the food aid only as a vehicle for securing local currency, the logic favoring financial aid is even more compelling, since it is more efficient to write a check in the first place than to ship grain.

But there may be circumstances when it is more *effective* (if not more efficient) to provide food rather than money. This can be the case during periods of hyperinflation (as in Indonesia) when a commodity is more valuable than an equivalent amount of cash. Also, there is some evidence (as in Bangladesh) that the *intended* beneficiaries will be the *actual* beneficiaries when food, rather than money, is provided.

In practice, though, this is a moot point. There is no choice between U.S. food aid and U.S. financial aid, because the two resources are not fungible. Instead, the choice is between food aid and no aid. Therefore, as long as the recipient country needs food, food aid is an appropriate (though often second-best) vehicle for transferring resources. This is true even when the primary objective of the food aid is to obtain cash (as in Bangladesh, Ghana, and Honduras).

Management Recommendations

Food aid is not homogeneous. Program food aid affects a country's overall economic development but does not attempt to reach specific groups of beneficiaries directly. Project food aid, by contrast, typically targets vulnerable groups and poor regions of a country. The former has had positive macroeconomic and policy-oriented effects contributing to long-term sustainable development. The latter has had important social effects through food for work, maternal and child health, and school feeding projects. Both kinds of food aid programs have had important equity effects, either directly or indirectly.

Because food aid is not homogeneous, broad generalizations are not universally applicable. Nevertheless, six management recommendations seem clear.

1. *Economic policy reform.* Provide program food aid to support long-term sustainable development only when the recipient country a) needs the food commodities and b) has in place (or is putting in place) an eco-

nomic policy environment to stimulate agricultural growth and food security. Absent these two conditions, food aid is likely to be counterproductive or, at best, neutral.

- **2.** Budgetary resources. When a government's development priorities are sensible, allocate proceeds generated from the sale of program food aid to support the overall budget or key sectors within it. When this is not the case, or when project food aid is monetized, use local currency to support discrete activities, including well-designed NGO- and donor-funded projects.
- **3.** Disincentive effect. Assume that large quantities of food aid sold on the open market of any country will depress domestic grain prices or otherwise be incompatible with achieving long-run sustainable development. Test the assumption by undertaking a careful analysis of the potential disincentive effect of food aid.
- **4.** *Nutrition.* Provide food aid supplements to improve children's nutrition only in conjunction with related interventions designed to improve children's health and mothers' knowledge. Provide food aid supplements to achieve educational objectives (and to improve children's nutrition) only when it is costeffective to do so.
- **5.** Equity. To benefit the poor directly, implement food-for-work projects, target low-income people in relatively poor geographic regions, and if feasible, supply self-targeting food commodities. To benefit the poor indirectly, provide food aid to countries where the government is committed to an equity-oriented economic growth strategy that emphasizes investments in agriculture and rural infrastructure.
- **6.** *Efficiency.* Provide food aid to countries that need food, not because food is an efficient way to transfer resources, but because food is more likely to be available than financial aid.

This Evaluation Highlights, by Donald G. McClelland of USAID's Center for Development Information and Evaluation, summarizes the findings of the study U.S. Food Aid and Sustainable Development: Forty Years of Experience, by Donald G. McClelland, Center for Development Information and Evaluation, USAID Program and Operations Assessment Report No. 22. This report and the individual country Impact Evaluations can be ordered from the Development Information Services Clearinghouse, 1611 North Kent St., Suite 200, Arlington, VA 22209–2111; telephone (703) 351–4006; fax (703) 351–4039; Internet docorder@dec.cdie.org. Editorial and production services provided by Conwal Incorporated.